

WHAT IS CLAIMED IS:

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1. A system for managing network resources comprising:
5 a network device operatively connected to the network having a processor capable of downloading a task over the network, executing the task, and providing the results from the task; and

10 a network management server that requests that the network device execute a task related to the management of resources associated with the network and receives the results from the task for use in management of the network.

15 2. The system in claim 1 wherein the task includes operations compatible with a network management protocol.

20 3. The system in claim 2 wherein the network management protocol includes the simple network management protocol (SNMP).

25 4. The system in claim 1 wherein the task includes operations compatible with an object-oriented programming language.

30 5. The system in claim 1 wherein the tasks includes operations compatible with byte-codes executable on a virtual machine.

6. The system in claim 5 wherein the virtual machine is compatible with the Java Virtual Machine.

7. The system in claim 1 wherein the task includes operations compatible with the Java object-oriented programming language.

8. The system in claim 1 wherein the processor on the network device executes a task that analyzes the use of network resources on one or more network devices connected to the network.

9. The system in claim 1 further comprising an application server device connected to the network and used to store tasks downloadable onto the network device.

5 10. The system in claim 1 wherein the task monitors a network parameter associated with the network and notifies the network management server when the network parameter reaches a threshold level.

10 11. A computer-implemented method of distributing management of network resources on a network to network devices exchanging information over the network,

comprising:

receiving a request on a network device to execute a task that performs a set of operations related to managing the network;

receiving an application over the network wherein the application includes operations for performing the task;

15 processing operations on the network device that requests network parameters from a remote network device;

transmitting the request for the network parameter over the network to the remote network; and

20 receiving the requested network parameter over the network from the remote network device.

12. The method in claim 11, further comprising:

processing operations on the network device using the network parameter; and

25 providing results from the processing of the task in response to the request to execute the task.

13. The method in claim 12 wherein providing results further comprises:

notifying a network management server when the network parameter reaches a threshold level.

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14. The method in claim 11 wherein the task includes operations compatible with

a network management protocol.

15. The method in claim 14 wherein the network management protocol includes the simple network management protocol (SNMP).

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16. The method in claim 11, wherein the task includes operations compatible with an object-oriented programming language.

17. The method in claim 11, wherein the tasks includes operations compatible with byte-codes executable on a virtual machine.

18. The method in claim 16, wherein the virtual machine is compatible with the Java Virtual Machine.

15 19. The method in claim 11, wherein the task includes operations compatible with the Java object-oriented programming language.

20 20. The method in claim 11, wherein the processor on the network device executes a task that analyzes the utilization of network resources on one or more network devices connected to the network.

21. The method in claim 11, further comprising an application server device connected to the network used to store tasks and download them onto the network device.

25 22. An apparatus for distributing network management of a network to network devices comprising:

a processor; and

30 a memory containing instructions when executed cause the processor to receive a request on a network device to execute a task that performs a set of operations related to managing the network, receive an application over the network wherein the application has instructions for performing the task, process operations on the network device that requests

network parameters from a remote network device, transmit the request for the network parameter over the network to the remote network, and receive the requested network parameter over the network from the remote network device.

5 23. The apparatus of claim 22 wherein the memory contains additional instructions for execution on the processor that continue processing operations on the network device using the network parameter; and provide results from the processing of the task in response to the request to execute the task.

10 24. The apparatus of claim 22 wherein the memory contains additional instructions for execution on the processor and providing results that further notify the network management server when the network parameter reaches a threshold level.

15 25. The apparatus of claim 22 wherein the processor executes instructions compatible with a network management protocol.

20 26. The apparatus of claim 25 wherein the network management protocol includes the simple network management protocol (SNMP).

25 27. The apparatus of claim 22, wherein the processor executes instructions compatible with an object-oriented programming language.

28. The apparatus of claim 22, wherein the processor executes instructions compatible with byte-codes executable on a virtual machine.

29. The apparatus of claim 28, wherein the virtual machine is compatible with the Java Virtual Machine.

30 30. The apparatus of claim 22, wherein the processor executes instructions compatible with the Java object-oriented programming language.

31. An apparatus for distributing network management of a network to network devices exchanging information over the network comprising:

means for receiving a request on a network device to execute a task that performs a set of operations related to managing the network;

5 means for receiving an application over the network wherein the application includes operations for performing the task;

means for processing operations on the network device that requests network parameters from a remote network device;

10 means for transmitting the request for the network parameter over the network to the remote network; and

means for receiving the requested network parameter from the remote network device over the network.

32. A computer program product, for distributing network management of a network to network devices exchanging information over the network, the product comprising program code instructions to cause a processor to:

15 receive a request on a network device to execute a task that performs a set of operations related to managing the network;

20 receive an application over the network wherein the application includes operations for performing the task;

process operations on the network device that requests network parameters from a remote network device;

transmit the request for the network parameter over the network to the remote network; and

25 receive from the remote network device the requested network parameter over the network.

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